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ERRORS IN THE USE OF ADVERBS.

I.—POSITION.

GEORGE P. MARSH, in his "Lectures on the English Language," says:* "An important advantage of a positional and auxiliary, over a flectional, syntax, is that the chances of grammatical error are diminished in about the same proportion as the number of forms is reduced; and, accordingly, we observe that the mistakes of bad speakers in English are never in the way of position, not often in particles and auxiliaries, but almost uniformly in the right employment of inflections, such as the use of the singular verb with a plural noun, the confounding of the preterite with the past participle, or the employment of the strong inflection for the weak, or the weak for the strong." How a scholar of Mr. Marsh's familiarity with the English language, and knowledge of its use, could have deliberately penned such a sentence as this, we do not understand. While we are not prepared to say that most of the grammatical errors made in using the language are not due to a misemployment of inflections, we are far from conceding that our errors in speech are "almost uniformly" attributa-

* Pp. 347, 348.

The Old Oaken Bucket.
A Miniature Illustration of the Superb Chromo.
From the celebrated Painting by JEROME THOMPSON.
How dear to this heart are the scenes of my childhood,
When fond recollection recalls them to view—
The orchard, the meadow, the deep-tangled wildwood,
And every loved spot which my infancy knew;
The wide-spreading pond, and the mill which stood by it.
The bridge, and the rock where the cataract fell,
The cot of my father, the dairy-house with it,
And every lov'd haunt which my infancy knew;
The old oaken bucket—the iron-bound bucket—
The moss-covered bucket, which hung in the well.

ble to this cause, much less that "the mistakes of bad speakers are *never* in the way of position," and "*not often* in particles and auxiliaries." Our previous articles, on the misuses of prepositions, are enough, if nothing more could be adduced, to show the falsity of the last position, so far at least as "particles" are concerned. But abundant additional evidence can be given. In our present article we propose to show that, as far as adverbs are concerned, Mr. Marsh made a very random assertion when he affirmed that "the mistakes of bad speakers are never in the way of position." Additional evidences of the incorrectness of his statement respecting "particles" may possibly be given hereafter.

One of the adverbs most frequently misplaced is *both*.* The following examples will suffice to illustrate the nature of this misplacement: "I trade *both* with the living and the dead, for the enrichment of our native language."—*Trench.* "The poems *both* of Homer and Virgil."—*Addison.* In neither of these cases are the two expressions that are coupled by *and* co-extensive. In each example, the one embraces a preposition, the other does not—"*with the living* and *the dead*;" "*of Homer* and *Virgil*." The former example should, therefore, read "I trade with both the living and the dead;" and the latter, "The poems of both Homer and Virgil." This makes the two expressions referred to by *both* and coupled by *and* similar and co-extensive. This correction, of course, is made on the supposition that no more words are to be used than are found in the given examples. The phraseology may, however, be corrected by repeating the preposition in each case: as, "I trade both with the living and *with* the dead," etc.; "The poems both of Homer and *of* Virgil." This wording, in some instances, is more elegant than the other; but it can hardly be said to be so here. All other things being equal, conciseness is preferable to diffuseness.

In a similar manner the expression *not only* is frequently

* It is not the place here to give our reasons for calling *both*, *either*, *neither*, *whether*, and other words similarly used, 'adverbs" instead of "conjunctions," as most grammarians do. We shall merely assume that they are such, and treat them accordingly. If any prefer to call them conjunctions, we have no objection. In speaking of them, however, as adverbs, we do it deliberately and from choice.

misplaced. Here is an example: "We not only avoid persons and things, but trouble, thought, etc."—*Whately.* From the position of *not only* before the word *avoid*, one naturally expects to find after *but* some verb corresponding to *avoid*. This unnecessary misleading of the mind should be, and may very easily be, prevented by a proper collocation; thus, "We avoid, not only persons and things, but trouble, thoughts, etc."

Either and *neither* are also similarly misplaced, and by some writers almost constantly. The following will serve as illustrations: "'Fearful' may *either be applied* to one who feels fear, or to circumstances calculated to inspire the feeling."—*Whately.* "'Rigor' may *either mean* an excess of severity or great strictness in adhering to rules."—*Ditto.* "We can *neither perceive* the beginning nor the end."—*Lord Kames.* "Such a comparison *neither tends* to gratify our curiosity, nor to set the objects compared in a stronger light."—*Ditto.* "Nor do we habitually, *in either* conversation or in writing, express ourselves so gracefully, or employ so classic a diction, as the English."—*G. P. Marsh.* "In consequence *either of* ignorance or inattention, the most correct writers have fallen into inconsistencies."—*N. Webster.* Each of these sentences is limpingly constructed, and, as far as the words following *either* or *neither* are concerned, needs to be balanced. This may be done by simply transposing the italicized words. Thus: "'Fearful' may be applied either to one who feels fear, or to circumstances calculated to inspire the feeling." And so with the other examples. Care should be taken that the word or phrase immediately after *either* or *neither* should find its counterpart after the succeeding *or* or *nor*.

It is safe to say, as a general rule, that an adverb should stand as near as possible to the word whose meaning it is designed to modify, especially if that word is an adjective or an adverb. An improper departure from this rule we find in the sentence, "We had *hardly* been there half an hour when the message arrived." Inasmuch as the word that really needs to be modified by *hardly* is not the verb *had been* but the adjective *half*, this sentence should have been worded, "We had been there hardly half an hour," etc.

But of all adverbs we know of none more frequently misplaced than the word *only*. In every morning paper, in every magazine, in almost every conversation, we find it stepping in where it ought not. Though its false position may not lead to a false construction of the sentence in which it stands, one frequently has to think a second time to make sure that he comprehends the meaning intended. Witness the following, which are only a sample of what might be presented: "'Fetch' properly includes the going in search of the object, and 'go,' when used with it, is redundant, because it *only* expresses what 'fetch' implies."—*G. P. Marsh.* This is equivalent to saying that the word "go" does nothing more than "express" what the word "fetch" implies; whereas Mr. Marsh means that "go" expresses nothing more than what "fetch" implies. Hence the proper collocation is, "because it expresses only what 'fetch' implies." Similar exceptions may be made to the position of this word in all the other examples following: "On looking in at the open door, we *only* saw a Lapland gentleman asleep."—*Lord Dufferin, Yacht Voyage.* "Often, when we think that we are witnessing some fearful proof of the total depravity of human nature in a young child, we are *only* witnessing the natural expression of a desire for bread and milk."—*J. G. Holland, Lessons in Life.* "Is genius *only* found in epic lays?"—*Cowper. Table Talk.* "Tenderness can *only* be shown, in general, by the educated and civilized, because they alone are considerate."—*Whately, Synonyms.* "Poor General Harrison *only* survived his inauguration one month."—*N. Y. Observer.* "The squadron, at this time, *only* consisted of two small war vessels."—*N. Y. Herald.* "The Morgan Envelope Company have *only* reduced their hours one-fifth."—*Cor. N. Y. Times.* "This boy has *only* been in the prison since Saturday last."—*N. Y. Times.*

From these examples it will be seen that the tendency, even among good writers, is to place *only* before a verb, whatever may be the word or phrase to which it properly belongs. And this misplacement Dean Alford, in his "Queen's English," attempts to justify. He gives, as an example, the question, "Did you see a man and a woman?"

together with the reply "No; I only saw a man." This, as he adds, is the ordinary colloquial English. And he endeavors to justify it by saying, "The two things to be opposed are two acts of seeing. Seeing a man, and seeing a man and a woman. It [*sic*] was not the same sight. I only performed the one; I did not go further and perform the other. I only saw a man; I did not see a man and a woman." The dean errs in supposing the reference to be to two acts. There is but one act, and the question is whether it was directed to two objects, or to only one of them. We doubt very much whether the good dean was satisfied with his own reasoning, for he immediately added, "Of course, the other way ["I saw only a man"] is right also, and, strictly speaking, the more technically exact of the two." But really the true meaning of this answer is not obtained from the words themselves so much as from their connection with the foregoing question. Properly speaking, "I only saw a man" implies "I did not speak to a man, I did not even meet a man, I only saw a man." Hence, in answer to the question, "Did you see a man and a woman?" the words in question convey the meaning intended, not because it is their legitimate import, but because of the stress laid, in uttering them, upon the final word. The position of the adverb before the verb indicates a modification of the verb alone, unless the verb together with the words immediately following it makes, or may be viewed as making, a sort of verbal phrase; as, "He only *made an explanation;*" which is equivalent to saying, "He only explained himself." So with the example quoted by Dean Alford,—"They only *consult to cast him down* from his excellency;" *i. e.*, they do nothing else. This, however, is not the case with the colloquialism which the dean seeks to justify. No one, in distinguishing between making an explanation and doing something else, would say, "He made only an explanation;" this implies a distinction between making an explanation and "making" something else. Hence, even more apparent, if possible, becomes the impropriety of saying "I only saw a man," when one means "I saw only a man."

There is a similar misplacement, in colloquial English, of the word *not*, which, though common enough, can hardly be

justified. For example, you ask your companion if he thinks it will rain to-day, and ten chances to one, if the weather, though cloudy, promises to be fair, his reply will be, "I *don't think* it will;" just as though he did not think anything about it. With many persons this, possibly, is the case. But for one who thinks, the proper reply to make, of course, is "I think not;" *i. e.*, "I think it will not rain." This word is very frequently misplaced. Bishop Watson, speaking of "Anson's voyage," says, "It is not a genuine book, having *not* been written by Walter, to whom it is ascribed, but by Robins." Its proper position here is after *written*. Whately says, "This does *not* proceed from their overrating their own abilities, but merely from their overrating the claims of wealth and rank." Correctly expressed, the sentence would be, "This proceeds, not from their overrating," etc.

A similar false position is, not unfrequently, given to the word *never*. Here is an example:

> "Such bursts of horrid thunder,
> Such groans of roaring wind and rain, I *never*
> Remember to have heard."—*King Lear.*

"I *never remember* to have heard" can hardly be said to be English, even though Shakespeare penned it. "I do *not* remember to have *ever* heard" would be the proper wording in ordinary prose. But as "licenses" are allowable in poetry, especially in Shakespeare's, we pass on. A like misuse of *ever* in connection with *remember* we find in a Philadelphia paper of March, 1863,—"We have heard within the past year of more of such perversions than we *ever* remember to have heard of before." If we remember anything, we do it now. Hence we may say we "now remember," though liable perhaps to the charge of tautology; but there is no propriety in saying we "*ever* (*i. e.*, at any time,) remember." The wording of the clause should be—"than we remember to have ever heard of before;" or, "than we remember ever having heard of before."

We note only one other false position, and that is of an adverb or an adverbial phrase between the prefix *to* and the rest of the infinitive form of a verb; as, "to wholly cease."

However common this is, and it has become seemingly almost universal, it is something of comparatively recent date in the language, wholly unknown to the English of the last and previous centuries. It is a use of words avoided by correct writers and speakers, while many indulge in it unconsciously, even though aware of its inelegance and impropriety. The connection between this prefix and the verb, or auxiliary, to which it belongs—"*to go*," "*to have gone*"—is one of the closest in the language. Except in the matter of spelling, it is as truly one with the verb as other prefixes are with the words they help to form; as, for example, *ever* in *everlasting, ever-loving; to* in *to-day, to-night; be* in *before, behind*, etc. It is true it may, under certain circumstances, be dropped; as, "I saw him (to) do it;" "Must you (to) do it?" "Let us (to) go." But it should no more be separated from the rest of the infinitive form by an intervening word or phrase than other prefixes from the words of which they form a part. In some languages this prefix appears as a termination, distinguishing the infinitive from the verbal forms, and is as inseparable from the stem as any other termination. There is no good reason why it should not continue to be thus regarded in English. The modifying word or phrase may always be placed either before or after the verb without danger of obscurity or ambiguity, while the separation of the prefix from the rest of the infinitive is always inelegant and often exceedingly harsh. The following examples will serve to illustrate this: "The author sits down to again address himself [Say, to address himself again] to the public."—*Bloomfield, N. Test.* "There is nothing to painfully arouse [painfully to arouse] the attention."—*A. K. H. Boyd.* "To the man of real talent, it is a most painful trial to intellectually come down [to come down intellectually]."—*Ditto.* "He cannot be said to more than half rule them [to do more than half rule them; or, better, to rule them more than half]."—*Nation*, July 25, 1867. "Captain Helen, with several of his officers, proceeded to, if possible, ferret out [to ferret out, if possible,] the perpetrator of the deed."—*N. Y. Herald.* "Emanuel beheld, and to behold was to, as he was prepared, love [was to love, as he was prepared to love,] the fair image of the lady."—

Harper's Mag., Dec., 1862. The inelegance and impropriety of the last two examples must be admitted on all hands. And yet there is no really valid reason for condemning these and not the others. To any one not trained to familiarity in this use of words, all these examples are harsh and uncouth, though some perhaps are a little more so than others. The entire usage is false, unidiomatic, and should be carefully avoided by those who have any desire to write good English.

S. W. W.

THE GEOGRAPHY OF JAPAN.

II.

THE first ancient division of the empire was made into circuits and provinces in the second century after Christ, at which time the dominion of the Mikado extended to about the 38th parallel of north latitude. The number of provinces was then thirty-two. About the end of the seventh century, the whole number of provinces was increased to sixty-six. These boundaries then fixed were re-surveyed between the years 723–756 A.D. This work was mainly done by two Buddhist priests, who are said to have buried charcoal in the earth at points on the boundaries, which was the most imperishable mark they could devise.

These divisions, which are still (incorrectly) marked on most maps of Japan are as follows:

The Go-kinai or Five Home Provinces are:—Yamashiro, Yamato, Kawachi, Idzumi, Setsu.

The Tôkaidô, or Eastern-sea Circuit, comprises fifteen provinces, viz:—Iga, Isé, Shima, Owari, Mikawa, Tôtômi, Suruga, Idzu, Kai, Sagami, Musashi, Awa, Kadzusa, Shimôsa, Hitachi.

The Tôzandô, or Eastern-mountain Circuit, comprises eight provinces, namely:—Omi, Mino, Hida, Shinano, Kodzuké, Shimotsuké, Mutsu, Déwa.

The Hokurokudô, or Northern-land Circuit, comprises

seven provinces, viz:—Wakasa, Yechizen, Kaga, Sado Island, Noto, Yechiu, Yechigo.

The Sanindô, or Mountain-back Circuit, comprises eight provinces, namely:—Zamba, Tango, Tajima, Inaba, Hôki, Idzumo, Iwami, Oki (group of islands).

The Sanyôdô, or Mountain-front Circuit, comprises eight provinces, namely:—Harima, Mimasaka, Bizen, Bitchiu, Bingo, Aki, Suwô, Nagato.

The Nankaidô, or Southern-sea Circuit, comprises six provinces, namely:—Kii, Awaji, Awa, Sanuki, Iyo, Zosa.

The Saikaidô, or Western-sea Circuit, comprises nine provinces, namely:—Chikuzen, Chikugo, Buzen, Bungo, Satsuma, Hizen, Higo, Hiuga, Osumi.

The "two islands" are Tsushima and Iki.

By tracing these divisions out on a good large map, and remembering that Kioto was the chief city and capital, the appropriateness of the names will be understood. All the names of these countries are pure Japanese; each one has also a duplicate Chinese name ending in *shiu*, which means country. Thus the Chinese name of the province of Nagato is Choshiu; Kaga, Kasshiu; Satsuma, Sasshiu,* etc. All these names have meanings which are often very appropriate, and extremely beautiful. Despite all the political changes, and the obliteration of old landmarks, which is such a passion with the officers of the present government, these names will remain for scores of years to come. Since the accession of the Mikado to full power, and the establishment of the present Imperial Government, the large northern provinces of Oshiu and Dewa have been subdivided. Dewa into Uzen and Ugo; and Oshiu into Iwaki, Iwashiro, Rikuzen, Rikuchiu and Michinoki. This was in 1868. At the same time to Yezo, Saghalin, and the South Kuriles, was given the collective name of Hokkaidô, or "Northern Sea Circuit." This circuit was divided into eleven provinces, making the entire number of provinces in the Japanese Empire eighty-four. The Liu Kiu islands will probably constitute the eighty-fifth.

The coast of Japan abounds in promontories and harbors.

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* Note the compensation for elision, made by doubling the final consonant of the first syllable of the compound.

Besides large numbers of coves, harbors of refuge, etc., there are fifty-six large harbors, many of them land-locked and capable of admitting large European vessels. Many of them were first surveyed by the survey-boats of the United States navy. Many of their names, however, are so badly spelled, that when pronounced by foreigners, the natives cannot understand them, and hence the Japanese pilots are often roundly abused by foreigners, and accused of not knowing the names of places in their own country, which it is their particular business to be informed about.

In some cases, these names are entirely wrong. The treatment of Japanese pilots by foreigners is quite like that of Americans I have met with, who after a few days' study of grammars and phrase-books, attempt to talk Japanese fluently, and then scold the poor natives for "not understanding their own language."

Strange to say, the Japanese do not give any names to the straits or bays of their own country, notwithstanding they have many fine maps and sea-charts. All the names of straits, gulfs and bays, and of many of the capes around Japan, have been given by foreigners, and some are entirely foreign names. Indeed Japanese geographical nomenclature originated with a people who kept inside of their country, and looked over the land to the ocean from within the country, whereas foreigners look to the land from the ocean, and have felt the necessity for names of capes, bays, straits, etc.

The largest part of the surface of Japan is hilly and mountainous. Some provinces are entirely so. The large plains are in Mikawa, Mino, Owari, Oshiu, Yechigo, and the Kuantô.

The province of Shinano is a large table land 2,500 feet high. Its descent on the side toward the Pacific is very steep. Ranges of mountains intersect the main island from Kioto to the northern extremity, making two great watersheds. Hence the rivers are, of necessity, torrents in rainy weather, in spring very wide and shallow, and in dry weather wastes of sand and pebbles. The highest mountains are Fujisan or Fujino-yama, which foreigners call Fusiyama, a dormant volcano, 13,080 feet high, in Suruga,

Hakuzan in Kaga, Gassan in Uzen, the Nikkô range, etc. Asama-yama, and Asoi-yama, are active volcanoes. The longest river in Japan is believed to be the Tonègawa. The river between Tokei and Yokohama, misnamed Logo, a foreigner's corruption, is properly the Tama-gawa. It may be well to note here, that *kawa*, or *gawa*, means a river; *san*, or *zan*, mountain; *nado*, channel; *suwo*, tide; *hama*, a strand; *saki*, cape; *shima*, or *jima*, an island, etc.

The longest lake in Japan is Lake Biwa or Otsu. It is about sixty-two miles long, and about twenty-two miles wide in its widest part. Seven small steamers ply upon it. The Lakes of Hakona, Chiuzenji, Iwashirro, and Suwo, are noted more for their natural scenery, historical associations, or height above the sea, than for their size.

Japanese scenery is never sublime, though always pretty, and in many places charming. Almost all of the entire country is covered with timber of every kind, variety, and use. A Japanese valley landscape is an expanse of rice fields, and the mountain slopes are a succession of terraces, on which this staff of life grows. On the plains, wheat, beans, potatoes, cotton, barley, indigo, etc., abound. One of the first things noticed by an American eye is the total absence of fences, walls, and even hedges, though the latter are seen in the immediate vicinity of dwellings. Live stock of any kind is never seen in a Japanese landscape. The "thousand hills" are there, but no "cattle." Horses, cows and oxen are always led or bridled. There are no sheep, though efforts are being made to domesticate them. Wild and tame hogs are moderately numerous. There may be goats in Japan, but the writer never saw or heard of them. Bears, wolves, deer, foxes, badgers, martens are well known animals. Monkeys are so numerous as to be very troublesome in certain sections of the country.

In this meagre sketch, we cannot enter into details of physical geography. Japan is a land which, by the frequency of tai-funs, earthquakes, and volcanic eruptions, is interesting to the student of cosmical physics.

Indeed, so regular are the recurrence of seismic phenomena, that were proper observatories established, and were Japan equipped with a signal service, a coast-survey,

and a staff of geologists, it would be scarcely presumptuous to hope that the occurrence of an earthquake in Japan might, in time, be predicted with as much certainty as is that of a storm in the United States. It would be a great day for Japan could one of her own sons extort the secret of the tremors of Mother earth, from her own breast, and thus set the head of fact, and the crown of prediction upon the as yet headless "science" of seismology.. Thus far, we know little enough about the tides, currents, winds, and general physical phenomena of Japan, but as yet there is enough known of these things, and certainly of the descriptive geography of the country, to correct the hitherto unbridled license of imagination and ignorance that has thus far led astray, and is still leading, the rising generation who now are deceived by the geographies and atlases that pretend to describe Japan.

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EMINENT AMERICAN EDUCATORS DECEASED IN 1873.

THE teachers and benefactors of education who passed away in 1873 were a mighty host, mighty in numbers, beyond any former years, and still mightier in intellectual power and comprehensiveness of genius. Fifteen men at the head of their respective institutions, and some of them with world-wide reputations as teachers and leaders of scientific thought, have fallen during the year, and a host of stars of lesser magnitude, but still brilliantly adorning the intellectual sky, have also disappeared from the firmament.

The year began with the loss of a veteran teacher. On the first day of January, 1873, HARVEY PRINDLE PEET, LL.D., for forty-two years Principal of the New York Institution for the instruction of the Deaf and Dumb, died at the Institution, in the 79th year of his age. Born in Bethlem, Conn., Nov. 19th, 1794, fitted for College at Phillips,

Academy, Andover, Mass., teaching a district school from the age of sixteen to procure the means for a higher education, he graduated from Yale College in 1822, and abandoning his intention to enter the ministry, he became the same year a teacher in the American Asylum for the Deaf and Dumb at Hartford, where he continued for nearly nine years, when he was called to the Principalship of the New York Institution, and entered at once upon his life-work. How faithfully and earnestly he labored for this class of unfortunates, in the face of almost insuperable difficulties, and how large were the additions he made to the facilities for instructing deaf mutes, those who were long associated with him for so many years can best relate. He withdrew from active duties in 1867, in his 73d year, but was still retained as Emeritus Principal, his son Isaac Lewis Peet, LL.D., worthily and appropriately continuing the work his father had so long conducted.

Rev. WILLIAM A. DOD, D.D., who died at Princeton, N. J., Jan. 2d, in his 55th year, was an Episcopal clergyman of that University town, a graduate of Princeton in 1838, was tutor in the college from 1840 to 1841, and Professor of Architecture and the Fine Arts from 1855 to 1859.

Jan. 8, SAMUEL ADAMS LYONS LAW POST died at Ellenville, N. Y., aged 44 years. He was born in Meredith, Delaware Co., N. Y., June 10th, 1829. Commenced teaching a district school when he was not yet fourteen years old, graduated from Yale College in 1853, and immediately returned to the teacher's profession, taking charge of an Academy at Mamaroneck, N. Y., for a year, of a Classical school in Derby, Conn., for the next two years, and in 1856 became principal, and two years later proprietor of the High School at Ellenville, Ulster Co., N. Y., which he conducted with great success for twelve years, when, having been admitted to the bar, he commenced the practice of law. In 1871 he was prostrated by disease of the lungs, and being compelled to abandon the practice of his profession, attempted journalism in New York City, but was soon prostrated by the progress of his disease and came back to Ellenville to die.

REV. JOSHUA LEAVITT, D.D., who died in New York City Jan. 16, 1873, in the 79th year of his age, was better known as a reformer and journalist than as a teacher, yet he had been a very successful teacher, and the author of some of the best reading books for schools ever published. He graduated from Yale College in 1814, and spent the next five years in teaching, and four more as a practising attorney in Vermont, where he compiled his "Easy Lessons." From 1825, when he entered the ministry, he was active in all manner of reforms, but in none more than in the advancement of public school education. Amid more than forty years of journalistic life he found time for the preparation of a series of Readers in continuation of his Easy Lessons, and to the last manifested a lively interest in every department of intellectual culture.

On the same day, died at Ithaca, N. Y., Prof. WILLIAM CHARLES CLEVELAND, C.E., of Cornell University, the head of the Department of Civil Engineering in that institution. He was an accomplished scientist, a graduate of the Lawrence Scientific School, at Cambridge, Mass., in 1862, and had been connected with Cornell University from its organization. He taught with great enthusiasm and success.

The same day also, Mr. O. H. KILE, a graduate of the University of Vermont, in 1863, and for some years past a prominent and successful teacher in Rhode Island, died at Westerly, R. I., where we was principal of the High School.

Rev. JOHN SEWARD, who died in Tallmadge, Ohio, Jan. 24, at the age of 89 years, was not, perhaps, for any considerable portion of his long life engaged in actual teaching, but to his active and persistent efforts, more perhaps than those of any other man, Western Reserve College, at Hudson, Ohio, owes its existence and efficiency.

MATTHEW FONTAINE MAURY, LL.D., who died at Lexington, Va., Feb. 1, at the age of 67, was not actively engaged in teaching till near the close of his life. Self-educated, and under circumstances which called forth the highest self-sacrifice and the most sustained effort, he had long

maintained a high reputation as a meteor ologist and hydrographer before he gave any personal attention to the work of instruction, but his "Navigation" had been a text-book in the Navy for thirty-five years, and his "Physical Geography of the Sea," though hardly a text-book, was the basis on which other works on Physical Geography were constructed. While in Europe (from 1862 to 1868) he was called upon by the Russian government to prepare a text book on geography for the imperial princes, and out of this grew his series of geographical text-books, of which that on "Physical Geography" is certainly the most meritorious school work on that subject yet published. In 1868 he accepted the Chair of Physics in the Virginia Military Institute at Lexington, Va., where he remained (though offered the Presidency of the University of Alabama, in 1871) till his death.

HENRY COIT PERKINS, M.D., A.A.S., who also died on Feb. 1st, at Newburyport, Mass., at the age of 69 years, was a graduate of Harvard College in 1824 and of the Medical School in 1827. He was eminent as a scientist and physician, President of the Massachusetts Medical Society, and had been for years an instructor and lecturer on Physics in the schools of Newburyport.

JAMES HENRY COFFIN, LL.D., Professor of Mathematics in Lafayette College, Easton, Pa., who died there Feb. 6, 1873, in the 67th year of his age, had devoted 47 years of his busy and active life to the teacher's profession. A graduate from Amherst College in 1828, he had taught during the greater part of his last two years in College, in Berkshire County, and resumed his school immediately after graduating. He established in Greenfield, Mass., the Fellenberg Academy, the first incorporated Manual Labor School in New England, in Sept. 1829, and conducted it successfully for eight years, publishing, meanwhile, a text-book on Book-keeping. He next taught for three years in Ogdensburgh, N. Y. From 1840 to 1843 he was tutor in Williams College, and published a treatise on "Solar and Lunar Eclipses, with Tables," well known to Astronomers and Navigators. From 1843 to 1846, he was principal of Norwalk Academy, Conn.,

and in Sept., 1846, was elected Prof. of Mathematics in Lafayette College, which chair he filled till his death. He was an eminent meteorologist, and had made large contributions to the volumes of the Smithsonian Institution, on Winds, Currents, Atmospheric Changes, etc., etc. He was also the author of a text-book on Conic Sections, a member of the National Academy of Science, and of the American Association for the Advancement of Science.

CALVIN MONTAGUE, M.D., who died at Westhampton, Mass., Feb. 9, at the age of 82 years, was a graduate of Williams College, and in early life taught for several years in Hortonsville, Randolph Co., Va.

Miss CAROLINE CHESEBRO, who died at Piermont, N. Y., Feb. 16, at the age of about 45 years, was more widely known as an author and magazine writer than as a teacher, her gentle, modest and retiring disposition rendering it impossible for her to be conspicuous anywhere. Yet she had been for eight years previous to her death one of the most efficient and beloved teachers of the Packer Collegiate Institute, Brooklyn, and we believe also a teacher at Canandaigua, her birth place, an an earlier period.

Mr. SAMUEL C. BARNES, who died in Brooklyn, N. Y., Feb. 18, at the age of 60 years, had been for more than 30 years, and until the last four or five years, a teacher in the public schools of that city, and an efficient actor in all measures for their improvement.

HUGH LENOX HODGE, M.D., LL.D., who died in Philadelphia, Feb. 26, at the age of 77 years, was a brother of Prof. Charles Hodge, of Princeton Theol. Seminary, and like him, a life-long educator. He graduated from Princeton College in 1814 and from the Univ. of Pa. as a physician in 1818, and was subsequently, for more than thirty years, a professor in the medical department of the University, and the author of numerous medical text-books.

Rev. ZEDEKIAH SMITH BARSTOW, D.D., a Congregationalist clergyman, and a zealous friend of education for sixty years, who died at Keene, N. H., March 1, at the age of

83 years, was a graduate from Yale College in 1813, from 1815 to 1817 a tutor in Hamilton College, Clinton, N. Y., and was offered a professorship there, but declined it. In a pastorate of more than fifty years, he was actively engaged in the promotion of Collegiate and Secondary Education.

ANDREW WATERS, a graduate of Amherst College in 1839, who died at Bunker Hill, Ill., March 2, 1873, in the 59th year of his age, was a life-long teacher. From 1834 to 1842 he taught in Delaware, and then removed to Kentucky, where he taught for seventeen years, at Scottsville and Bowling Green, and for three years longer in Columbia, Tenn. In 1862 he returned to the North, and taught for two years in Litchfield, Ill., and for nine years in Bunker Hill, till his death from pneumonia.

Mrs. OPHELIA M. LIVINGSTON, who died in Brooklyn, March 3, aged 65 years, was a most accomplished and excellent lady, who had been for many years at the head of a large female seminary in Savannah, Georgia.

CURTIS C. BALDWIN, who died at Prattsburgh, Steuben Co., N. Y., March 3, aged 74 years, was a graduate from Hamilton College, Clinton, N. Y., in 1825, had devoted his life to teaching. He had studied theology and law, but for about forty years was a successful teacher in Steuben County.

Rev. JUSTIN GAMALIEL RILEY, who died at Washingtonville, N. Y., March 5, at the age of 38 years, was a graduate from Williams College in 1859, and from Union Theological Seminary in 1862, and devoted himself to teaching, first in Schralenburg, N. J., and afterward in Brooklyn, N. Y. In 1872 he was compelled, by failing health, to relinquish his school, and removed to Washingtonville.

Rev. JOHN PAYNE CLEVELAND, D. D., who died at Newburyport, Mass., March 7, at the age of 74 years, was a graduate from Bowdoin College in 1821, taught an Academy at Wolfsboro, N. H., from 1821 to 1825, was Prof. of Mathematics in Phillips Academy, Exeter, N. H., from 1825 to 1827, after an interval in the pastorate, was President of Marshall College, Michigan, from 1837 to 1841, and subse-

quently again in the pastorate till 1862, when he was chaplain of one of the Massachusetts regiments.

Prof. JACKSON JONES BUSHNELL, who died at Beloit, Wis., March 8, aged 58 years, was a graduate from Yale College in 1841, was a tutor in Western Reserve College from 1842 to 1844, financial agent of Western Reserve College from 1844 to 1848; Professor of Mathematics and Natural Philosophy in Beloit College from 1848 to 1858, and from 1863 to 1873.

JOHN TORREY, M. D., LL. D., one of the most eminent scientists of our day, died in New York City, March 10, aged 75 years. He published, in 1817, a catalogue of the plants growing within thirty miles of New York City. In 1824 he was appointed Professor of Chemistry at West Point Military Academy; from 1827 to 1855 he was Professor of Botany and Chemistry in the N. Y. College of Physicians and Surgeons, and from 1828 to 1854 Professor of Chemistry in Princeton College. Since 1853 he had been Chief Assayer in the U. S. Assay Office, N. Y. He was the author of several valuable works on the Flora of North America and of the Northern States. He presented his valuable herbarium to Columbia College in 1860.

Rt. Rev. CHARLES PETTIT MCILVAINE, D. D., D. C. L., LL. D., Bishop of the diocese of Ohio, who died at Florence, Italy, March 12, at the age of 75, was a native of Burlington, New Jersey, a graduate of Princeton College in 1816, ordained a priest in 1822, was Professor of Ethics and Chaplain at West Point from 1825 to 1827; was consecrated bishop in 1832; was President of Kenyon College, Gambier, Ohio, from 1832 to 1840, and President of the Theological Seminary of the diocese of Ohio from that time to 1873. He was also lecturer on the Evidences of Christianity in the University of New York in 1831. Bishop McIlvaine was the author of several works, which have been used as textbooks in the Episcopal and other theological seminaries.

JOSIAH CLARK NOTT, M. D., an American physician, ethnologist and medical professor, died in Mobile, Ala., March 31, aged 69 years. He was a graduate of South Carolina

College in 1824, took his degree of M. D. at Philadelphia in 1827, was demonstrator of Anatomy to Dr. Physick, of Philadelphia, 1827–1829: spent two years in Europe in the study of Natural History, and in 1836 entered upon practice in Mobile, Ala., where he lived most of the remainder of his life. He was Professor in a Medical College in Mobile for over twenty years, and in the University of Louisiana in 1856–'57. He was the author of several ethnological works of considerable value.

MINERAL SUBSTANCES AS AIDS TO EDUCATION.

III.

HOW A SELECTED SERIES OF MINERAL SUBSTANCES MAY BE USED FOR INSTRUCTION IN OUR COMMON SCHOOLS.

WATER.—It would seem as if our school instruction, and consequently to a great extent in the thoughts of our after lives, we systematically neglect the most common of surrounding natural objects as being those least worthy of our notice. Animals and plants from distant lands, rare to us, and of comparatively little importance, are greatly regarded, whilst familiar forms, intimately connected with our every-day life, are left to illustrate the adage that "familiarity breeds contempt." Diamonds and precious stones are held up to the gaze of our children, gold and gold mines are placed in their thoughts;—but coal and iron? And so it is with water! We all know it as something wherewith to quench thirst, and as an essential to cleanliness; we have recognized its existence in the form of rain and dews, and in the school-room we have spoken of it as that which constitutes the seas, the lakes and the rivers of geography. But how few of us have ever realized its overwhelming importance, its all-pervading ubiquity in nature? its preponderating share in our own composition, in our flesh and our blood, our nerves and our bones, and in the composition of every animal and plant? How few of us know that it is an essential constituent of many of the most

solid minerals and a secret tenant of every rock, and that it is withal, not a mere domestic element, but from the loftiest mountain peak to the very bowels of the earth, in life and in death, the most restless, the most active and the most effective of all Nature's material servants? Without moisture, this orb would swing in space not merely a lifeless, but a changeless mass; mountains would tower eternally and valleys would never be filled up, volcanoes would die out and the very pulsations of the world would cease, for the spirit of all subterranean movements would have fled; the passage of time itself would be unrecorded, for the graver would have fallen from the hands of the recorder. Water and sunshine are, in fact, the mainsprings of the world's mechanism, and if we would study the design of the Great Mechanic we must perforce commence by observing the action of these prime movers. But whence comes this strange neglect,—this, we will not call it ignorance, but thoughtlessness? It is a relic of an old fashioned and pernicious system of mental training. But one hundred years ago, the study of nature was an almost untraversed field of mental culture, and the "philosophy of the schools" still misled the minds of men to reason not upon what "is," but upon empty words and upon what "ought to be," according to the ideas of the philosophers. Since then, however, an utter revolution of thought has taken place, and the wonderful progress of a century has been due to the development of a habit of inductive reasoning. And yet it is hardly too much to say that our present system of instruction still, to a great extent, ignores the fact of this revolution and its teachings, still neglects to lead the mind to an observation of those general and familiar truths upon which we must base the reasonings which alone will enable us ultimately to attain to the highest and most sound knowledge.

Now, in taking water as an "object," you will find, after having inculcated its physical characters (its *condition*, *color*, *lustre*, *diaphaneity*, etc.), its chemical composition and its properties, that its great value as a silent instructor lies in the opportunity it affords you of making your pupils *think for themselves*. What becomes of the water that falls to the ground in a rain-storm? Some runs off in streams, another

portion soaks away into the earth. Now, place a vessel of water exposed to the frost, it is broken to pieces by the freezing of the water: but if the water had been enclosed in the pores and cavities of a bank of earth, or of a rock, exposed to the frost, it would have been the bank of earth or the rock that would have been broken asunder. Pass near a bank of earth during a thaw, and the continual crumbling of portions, that you will notice, will illustrate your conclusion; and the fragments of rock that lie piled at the foot of an inland cliff tell the same tale. Now, turn your attention to the thousands of muddy streamlets that carry off a part of the rain-storm, or of the thawing snow. Take a glass of the muddy water and let the sediment subside, to show what it is that makes the water turbid; whence came that mud? whither is it being carried? But if this is going on in every rain-storm all over the world, what must be the obvious result? That the dry lands are being worn away, that mountains are being gradually brought low, and that the depths of the sea must be gradually being filled up with sediments. Let your lesson rest here, you have laid the corner-stone of a great geological superstructure;—by and by your pupils will learn that the present dry lands are themselves formed of sediments,—which were once laid down in former seas,—after having been eaten out of, and swept away from, still older continents and long vanished mountains.

Again, turn to the water that soaks away into the ground; what becomes of it? Does not the depth of water in the well become greater after the rain-storm? do not the springs, too, then pour out more copious supplies? With the history of wells and springs you may, and should give warning of the poisonous nature of well-waters, into which have soaked surface drainings from manure heaps and cess-pools, showing how fevers and cholera fall upon those who disregard such warnings.

Then, if your pupils are intelligent enough to follow you, you may explain to them the increased power of dissolving and changing substances possessed by heated water,—(you may illustrate this by homely examples taken from cookery);—you may tell them that the deeper we descend into

the earth, (as revealed to us by mines and hot springs,) the greater we find the heat; that water percolates every where through the rocks, as we know from our deepest borings, and that at very great depths, it must be so heated as to be capable of dissolving, of "boiling up," if you choose so to phrase it, the very rocks through which it passes, so that their nature, characters and appearances are altogether changed. Here rest again, you have laid another most important foundation-stone; you have virtually started in the minds of your pupils the idea of the "metamorphism" of rocks, and in the future they will be prepared to learn that these dissolving, boiling, plastic rocks are the sources of those movements of the earth's crust, which ultimately convert the sediments on the bed of the ocean into the rocks of high and dry continents. An intelligent teacher, who has at all mastered the subject, will in fine discover that water is an inexhaustible source of interesting information, and that with a moderately intelligent class, the difficulty will not be what to say, but what to leave unsaid to, or rather undrawn out from, the pupils about its wonderful agency in nature.

Whether it will be advisable to give these lessons on Water immediately after that on Ice, or whether it will be better to defer it to a later period, must rest with the judgment of each teacher. I have here put the two in opposition, because whilst ice presents itself as an "object" to cultivate *observation*, water seems especially adapted to develop the faculty of *induction*.

To prepare yourself to give this instruction you must, as a first step, if you have hitherto only studied from, and taught by, text-books, bestir your mind to think for itself. Take the few and necessarily skeleton statements here made, revolve them in your mind, ask yourself how far you comprehend their meaning, and then turn to other authorities for corroboration and details, and ultimately for further facts; then commence the digestive and assimilative process again;—be ever asking yourself "if such and such are the facts, what are the conclusions that I must draw from them? what are the causes of these effects,—or to what effects must such causes give rise?" Drawing your own conclusions,

refer back to your authorities for verification and correction.*

On the subject of Water, as a Geological agent, you may consult Dana's *Manual of Geology*, pp. 632 to 681 ;—Lyell, *Principles of Geology*, Book II. : also Tyndall, *Forms of Water ;* Maury, *Physical Geography of the Sea* and Manuals of Natural Philosophy, Chemistry, Meteorology and Physical Geography, for information regarding those properties of water that enable it to become so powerful an agent.

You now perceive that there are two sets of lessons to be derived from the mineral substances in your newly acquired cabinet, and you will learn that although every specimen may, perhaps, be made to yield both, yet that some, such as the common simple minerals, quartz, feldspar, mica, calcite, talc, barite, gypsum, native sulphur, rock-salt, and the metalliferous minerals are more adapted for cultivating the powers of observation, whilst others, which in an elementary series may include examples of the sedimentary, metamorphic and volcanic rocks and of mineral fuels, are especially useful in educing trains of thought. The former enable you to make out the ground-plan of mineralogy and its economic applications, whilst the latter lay the foundations of Geology. The plan to be followed in treating each group has been indicated in Ice and in Water respectively.

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* Your attitude as a learner must be all the time one of independent criticism of the opinions of others, whilst in turn you must submit every opinion of your own to the test of judgments more expert than yours. Statements of fact, where you cannot yourself verify them, must necessarily be received on "authority," but always, if possible, verify such statements by experiment yourself. Never receive any man's authority, on scientific matters, without some enquiry as to its worth. As no man can possibly attain to any respectable eminence in science, who is habitually loose in the statement of fact, the statements not only of the masters of science, of a Herschel, a Faraday, a Dana, a Huxley, or an Agassiz, but also of most scientific men holding responsible positions in the scientific world may, and, in truth, ought to be respectfully received by the tyro, but with the reasonings of any man, no matter how great his reputation. I would have you deal differently. Always sift facts from opinions, and upon these latter invariably exercise your own powers of reasoning. A scientific man of the highest standing may, by misapprehension, misstate a fact, but the different opinions held upon the same subjects show us that many such must necessarily be erroneous. You must judge for yourself, as far as your knowledge of the facts permits ; of course you will generally acquiesce in the opinions of eminent authorities, but you will not do so simply because they represent "authority." This practice of balancing evidence carefully will soon enable you to judge independently whether a new author or instructor is worthy of your confidence. Your experience as a teacher will remind you that your pupils, if their minds are not altogether stifled by "authority," are liable to question your statements to them, and if you are wise you will judiciously foster such a spirit, which is not so much one of doubt as of enquiry ; and what children thus do intuitively and occasionally, you should learn to do systematically and from habit.

Let us take Quartz—ascertain its physical characters, its *condition, form, structure, color,* kind and degree of *lustre, diaphaneity,* degree of *hardness,* state of *aggregation* of its particles, color of its powder or *streak, solubility* in water or in acid, *fusibility* before the blow-pipe, and *specific gravity.* This you may determine roughly by comparison. It is certainly heavier than water, and lighter, bulk for bulk, than a piece of iron or lead-ore; afterwards you may learn exactly *how much* heavier than water. We will suppose that you have taken up this specimen and examined its characters as above, without having looked for its name; now that you *know* the specimen *of your own knowledge,* look at the label to see what it is called. Next compare this Quartz with Ice, asking yourself in what points they resemble and in what they differ from each other? and which of these points gives us a certain distinction between the two? A child will probably say "the Ice is cold," but you will know better, for the Quartz might be at the same temperature; you will express it, that the Ice is easily *fusible,* melts at a low temperature, whereas Quartz is one of the most infusible of substances. Now look to see whether you have any other illustrations of the mineral, such as the varieties, Chalcedony and Agate; if you have, go over their characters, and see wherein they resemble and differ from the first specimen. This done, read up all that is said of Quartz and its varieties in your Manual of Mineralogy, then to complete your knowledge, look under the head of Quartz, as a "rock-forming" mineral, in your Manual of Geology. You will then learn both its use to man and its use in nature; the most important of world-building materials on account of its hardness, infusibility and insolubility, it is also the most abundant, occurring in most crystalline and metamorphic rocks. When these are broken up, it forms, by reason of its hardness, the coarser part of the fragments, pebbles and sand, and thus it becomes again the essential ingredient of most conglomerates and sandstones. Again this substance, so infusible by itself, yet heated with alkalies readily fuses and enters into combination with them, forming salts termed silicates. Such natural silicates constitute a very large group of minerals, including many of the most com-

mon; and artificial silicates are familiar to us as glass. You can illustrate this to yourself as follows: make a little loop of Platinum wire,—upon this fuse, in the blow-pipe flame, a little carbonate of soda into a clear bead, add to the fused bead a little finely powdered quartz, and you will find that it will gradually melt in the soda to a pellucid glass; next powder a little fragment of an iron-ore, and add a trace of the powder to your melted glass bead, it will become bottle-green. Here then you have the "impurity" in bottle-glass; how can you get rid of this impurity? Try a trace of powdered manganese-ore (Pyrolusite, for instance); most probably you will turn your green bead to a violet color, but in the arts the experiment, being performed on a larger scale, is so accurately conducted, that just sufficient manganese is used to neutralize the green and no more. By this little experiment you obtain an idea, faint, it is true, but still a foundational idea, both of the principles involved in the manufacture of glass, and of the nature and origin of many minerals. Finally, try to find specimens of quartz in the rocks and pebbles of your own neighborhood, and to recognize it in the collections of your friends: this will be submitting your knowledge to a practical test. In Feldspar and Mica *cleavage* is illustrated in different degrees; as it is also in Calcite, which moreover illustrates *solubility* in acid. Rock-salt illustrates *solubility* in water, and consequently the test of *taste;* also easy *fusibility*, and so each specimen, if judiciously chosen, will, with a general exercise of the faculty of observation, lead to the notice of some one character which it especially illustrates. Quartz, Feldspar, and Mica studied, try to distinguish them in some rock, such as Granite or Gneiss, in which they are combined. Rock-salt will suggest the important geological idea, that seas once existed where dry lands are now; and Calcite will lead you to read of limestones and of their origin. You will thus be led to study the subject of Coral-reefs and their teachings, one of the most interesting subjects in nature. They will give you indubitable evidence of great upward and downward movements of the earth's crust, and also of the immense periods of time involved in even single events of the world's history. For information on this topic, after

reading what Dana has to say about it in his Manual of Geology, refer to the same author's work on "Corals and Coral Islands." When you reach the metalliferous minerals you will learn more than ever the value of the blow-pipe in distinguishing minerals, and you will be interested in studying out the distribution of our great stores of mineral wealth, and the methods pursued in the mining of ores and in the extraction of the pure metal from the ore. A few experiments to learn how to distinguish between different kinds of mineral fuel, will be followed by studying in your Geology the distribution and history of coal. Such a work as Dawson's "Acadian Geology" will, by means of its cuts and by its statistics of the coal fields of Nova Scotia, at once give you a vivid idea of the forests of the Carboniferous age and of the enormous period of time represented by that one division of the geological record.

But I must cease. I might continue for pages telling you how to study the lessons given by (say) fifty specimens of mineral substances. "But stop!" you cry, "you have told us how to study their substances, but you have not told us how to use them in teaching." My reply is simply—study these substances yourself, as above suggested, and you will learn how to give instruction on them to others. All that you will have to do will be to use your judgment as to what portions of your knowledge to select as the *matter* of, and your common sense and experience as a teacher as to the manner of imparting, your information. The following recapitulation, however, covers the whole subject, and you can apply it first to your own studies and afterwards to your instruction:

1st. Take certain simple minerals as illustrations of the characters of minerals to be observed and compared. Be careful to use the proper terms in which to express these characters. (These terms you will find given in the commencement of Dana's Manual of Mineralogy. It will be a good exercise for yourself to arrange the characters and their terms in a tabular form; this will prevent your having to "hunt" them up in your Manual every time you want them.)

2nd. By constant repetition and comparison, comparing

each new mineral with those that have gone before, impress upon the mind the *distinctive* characters of each substance.

3rd. Build up gradually an idea of the geological phenomena that these substances illustrate. The more prominent of these are:

a. The present action of the agents of geological change—water, heat, and life.

b. The results of these changes, as illustrated in the formation of rocks, sedimentary, metamorphic and volcanic; and in limestones.

c. The slowness of all the operations of Nature, and consequently the vast extent of time involved in the simplest facts of geological history.

4th. By no means neglect the economic applications of the various substances.

You may accomplish all this by dividing your lesson on each substance into two parts,—the first part devoted to the observation of its characters and to experiments to illustrate these; (to be made by the pupil as much as possible, and not merely to be shown by the teacher,) and the second to be given to the discussion of the topics involved in its history.

In conclusion I will only add, that I know from experience that such instruction, as above suggested, can be effectively given by a teacher, who chooses to make the necessary preparation, and that it is, when properly given, of the greatest value to the pupils, training their faculties and developing their minds in the most advantageous manner. I venture to think in fact, that excellently adapted as plants and animals are for giving in their turn scientific training, yet that neither of these subjects are equal, as a first step, to minerals in this respect, whilst in the ulterior good to be obtained they will not even admit comparison. One of the ends in teaching Botany and Zoology, that the foreseeing instructor will keep in view, is that such knowledge may enable the pupil hereafter to follow out the wonderful history of all life, a history that is recorded in the rocks, and that it is the province of Geology alone to interpret.

REMINISCENCES OF AGASSIZ.

THE death of Professor Agassiz has caused the appearance in print of numerous reminiscences of him, and among others of some that we find in the Cincinnati *Commercial.* They are contributed by Mr. D. T. Wright, who twenty years ago was a student in the Harvard Law School, where he had for contemporaries Mr. Horace Gray, who is now the Chief Justice of the Massachusetts Supreme Court; Mr. Wm. C. Endicott, who also is or has been a judge in that State; Mr. Dorman B. Eaton, Mr. Sidney Webster, and other gentlemen who have since become very well known to the profession and the public. It was at that time customary, when the term in the Academic Department came to a close, and the commencement exercises were held, to have an exhibition in the Law School also. This exhibition consisted of the trial, before a jury of academical seniors, of a case made up by the law professors and argued by certain law students chosen by their fellows. On the occasion to which Mr. Wright particularly refers, the case to be tried was selected rather than made up, and was nothing more nor less than an actual libel suit which had been brought against Professor Agassiz, and which was then pending at Albany. The story of this actual suit will, we may remark, repay attention from all persons whose duty it is to keep a watch on Superintendents of Schools and other such officials. It may not be generally known, but a great many remarkable stories could be told about the introduction into the schools of this or that State of this or that publisher's "line" of school-books. Of this, as of other matters of administration, it has been true of late years that often "there has been money in it," and snug sums of money made out of it. And it is true, too, that perfectly well-meaning and honest Superintendents of Schools are often imposed upon, to the great wrong not only of the tax-payer, but of the pupil. How it happened that the suit in question was brought against Professor Agassiz was as follows: At the time already referred to, our New York Superintendent was desirous of obtaining for use in his course of instruction a geological map, and

gave public notice to that effect. In due time such a map, handsomely engraved and mounted, was offered for acceptance by a certain gentleman, who, if Mr. Wright is not mistaken, put a handle to his name and called himself a professor. The Superintendent, who frankly confessed his incompetence in such matters, submitted the map to a professor *bona fide*, who at once certified that its merits and utility were great, and upon this the bargain was about to be closed. The map was in reality a marvel of stupidity and perfectly worthless, and there were not wanting people to say that the professor *bona fide* as well as the pseudo-professor was inequitably interested in the event and was to have a share of the profits, which would have been large, if not enormous. At this stage of the proceedings a scientific gentleman, who saw that an imposture was to be practised, got a copy of the map and sent it on to Agassiz, with a request for his opinion of it. Mr. Wright asserts that when the professor first saw this chart it was eleven o'clock at night, he having been away from home when it was received; that as he unrolled it he gazed in wonderment upon it; and that it required between two and three hours for him to comprehend that so vast an amount of ignorance could have proceeded forth from one man. That same night he wrote a letter, of which Mr. Wright gives a copy, in which with all his accustomed energy and out-spokenness he denounced the map as a humbug; he had never seen, he said, more grotesque combinations than in the illustrations introduced among the tertiary beds; ichthysosauri and plesiosauri of the lias he found parading amid the pachyderms of Montmartre in a manner as ridiculous as if one were to find in a universal history Alexander the Great fighting battles in China with the Emperor Napoleon. He ended by authorizing his correspondent to publish the letter if that should be found necessary. The letter was published, the bargain between the two geologists and the Superintendent came to an end, and hence the libel suit, which we suppose Agassiz won, but as to which we have no further information. As for the libel suit in the Law School Moot-court, a verdict was obtained by neither party, though the jury were locked up for the whole night and had a very noisy session. Mr.

Wright was himself one of the counsel for the defence, and he draws a lively picture of the way in which Agassiz, always eagerly earnest and always ungrudging of labor, endeavored to fit him for his appearance in court by giving him weeks of gratuitous and enthusiastic instruction in geology. A fact like this gives a clue to the distinguished naturalist's great success as a teacher.—*Nation.*

HONEY-MAKING ANTS.

THE "American Naturalist" publishes a paper which was read before the California Academy of Sciences, on "The Honey-making Ant of Texas and New Mexico." Comparatively little is known of their habits, but that little is so interesting, that we shall hope for fuller information. The community appears to be divided into three distinct classes, each of which performs its allotted labor without the least encroachment upon the duties of its fellows. They may be designated as follows:

No. 1—Yellow workers; nurses and feeders.

No. 2—Yellow workers; honey makers.

No. 3—Black workers; guards and purveyors.

A description of the nest will aid us in understanding the work performed by each class. It is underground, entrance being gained by one hole only; there is another opening, but it appears to be used for ventilation. The interior is divided into square cells, each one inhabited by a honey-maker. Where the others live, or whether there are accommodations for them in the nest, we are not told. Surrounding the two openings on the surface is a square, around three sides of which a guard constantly moves; the fourth side, which generally faces towards the south, is left unprotected. The guard consists of two lines moving in opposite directions. It never deserts its post unless danger threatens, when a number sally forth to face the foe, raising themselves upon their hind tarsi, and moving their mandibles to and fro as if in defiance. Spiders, beetles, and other

insects are thus attacked, and after the battle, their dead bodies are quickly removed to a distance from the nest. This guard duty is performed by a section of class No. 3. The workers of this class are subdivided into two sections, one bites off the flowers and leaves, and the other picks them up and carries them to the nest. They do not, however, take them into the nest, or even to the entrance. They place them in a heap in the centre of the square, entering by the southwest corner, and leaving by the same path. The hole by which access is gained to the nest, is near the south-east corner of the square, and along the direct path between it and the central heap, go the yellow workers: the nurses and feeders of class No. 1. A black ant is never seen on this line, nor a yellow worker on the other line. The nurses or feeders then convey the flowers and leaves to the honey makers, class No. 2, who live in the cells mentioned above. Apparently they are prisoners. Indeed, it would be difficult for them to leave the nest, as their abdomens are so swollen by the honey they contain, as to render locomotion a task of difficulty, if not an impossibility. It is surmised that the rest of the inhabitants feed upon the honey thus obtained, though it is not certainly known. The Mexicans prize the honey, not only as a delicate article of food, but as a remedy to apply to swollen or bruised limbs. The observations embodied in this paper were made in the neighborhood of Santa Fé, New Mexico, by Captain W. B. Fleeson.

NEARLY half a million of money has been voted by the Legislative Assembly in Australia for the purpose of carrying out the requirements of the new Educational act in the colony for the present year. This large sum is an increase over the appropriation for the past year under the old educational system of over £250,000. The Legislative Assembly, when called upon to deal with this vote, is said to have exhibited a determination to allow no ill-timed considerations of economy to interfere with a fair trial of the new system, and the liberality evinced by the House surpassed even the expectations of the Government.

THE MODERN CANAANITES.

IN the mountains which form a geographical connection between the systems of the Taurus and the Lebanon, lying along the Syrian coast, reside a strange people. Subject to Turkish rule, they still keep up their tribal organization, and though ignorant alike of the origin of their race and religion, they maintain with great tenacity their hold upon their nationality and their creed.

In A. D., 1163, Benjamin of Tudela calls them "Assassins," who do not believe in Islam, but follow one like unto the prophet "Karmath." During the Crusades, they were at war with the Christian Princes. In 1697 the Turks called them "*Neceres*, who adhere to no certain religion, but assume that of the people with whom they converse, being such Proteuses in religion that none could discover what shape their consciences are really of." Some writers have attributed to them a Persian, while Volney, in 1780, adopted the idea of a Gnostic, origin. Later, Renan in his Report to the Emperor Napoleon in 1860, says "The Nosairees, or 'little Christians,' have more in common with Christians than with Moslems, and are the most degraded population in Syria. We were informed that they worship a woman. They are called at times a Gnostic sect, having passed in all these centuries through all the alterations that a religion denuded of sacred books and of a church organization, could not fail to undergo."

These strange people are probably descendants of those sons of Canaan who were in possession of Arka, Arvad, Zimra, and Sin, on the seashore, and of Hamath, when Abraham came from Ur of the Chaldees. Driven by successive conquerors from their towns, they found refuge in these dark mountains, and have there remained, and doubtless many of their brethren fleeing from Joshua joined them in their inaccessible retreat. This accords with a tradition among the Nosairees that their ancestors were expelled by Joshua from Palestine. Many of their castles now standing bear Jewish names, such as Joshua, Solomon, Zion, and the like.

The Nosairees are not identical with the Assassins, who were famous in the days of the Crusades, for the former existed in Syria previous to the arrival of the *Ismaileyeh* or Assassins, who came from Persia, and whatever each may owe to the Carmathians in the mosaic of their creeds, they have ever been distinct and hostile peoples. The pagan worship of Venus, or Ashtaroth, erroneously attributed to this people by Disraeli and a host of other writers, pertains rather to the *Ismaileyeh*, and there is no reason to believe that these descendants of the Canaanites are a whit more immoral than any other non-Christian sect in Syria. Woman not only has no place in their religious system, but is not allowed even to witness the religious rites which are celebrated only by the initiated among the adult males. They hold, however, in their doctrine of metempsychosis that certain men who have failed in this life to accomplish anything, after death become women, and that good women under certain conditions may appear as men in the next life.

Recent discoveries of MSS. show that the creed of this people is a confused melange of Idolatry, Judaism, Christianity, Islamism. They recognize the prophetic character of Jesus Christ, frequently quote the names of the apostles, and many passages from the Psalms and New Testament; they revere the name of Mary, observe the feast of Christmas and New Year's Day according to the calendar of Julian; they celebrate Epiphany, Palm Sunday, Easter, and some of the Apostles' and Saints' days, and in their Communion Service they use consecrated wine. From the Jews and Moslems they have borrowed ablutions and circumcision, and have adopted Moslem names, except those of Omar and Abu Bekr, whom they curse and abhor. They quote much from the Koran, but obtain many features from the Sabians and Magians, as appears from the respect they pay to light, fire, and the heavenly bodies.

In their writings Mahomet and Christ are referred to as the same person manifesting himself at different epochs.

The Nosairees, as a sect, derived their creed from Abu Shuaib ibn *Nusair* in A. D. 840. The suggestion of Renan that the name *Nosairee* is a diminutive of Nusara, meaning "*little Christian*," and that the Jesuit Missionaries who

translate the word into "*bad Christians*," do not appear to be well founded. The author of one MS. requires of the Nosairees that they discover nothing of their religion to strangers; that they love their brethren, and be charitable, abstaining from theft and oaths; that they suffer poverty patiently, and bear ill-treatment on the part of their women.

A Nosairee, with whom I have conversed, says that his people hold among other things that God, of their sins, created devils, of the sins of devils he created women, and, consequently, prayers are not taught their women. The souls of learned Moslems after death pass into donkeys, those of Christians into pigs, and those of Jews into monkeys, wicked Nosairees into eatable animals, good but skeptical men into monkeys, and those who do both good and evil into human beings of other sects. They accept no proselytes except from the Persians, who, with them, believe that Ali was a manifestation of God. My Nosairee informant intimated his belief that his people originated in Persia, but said that in Jewish history they were called Philistines. His people put on at will any religion, but remained Nosairees at heart. They know each other by signs. One of the six questions being, "If your uncle is thirsty, from whence do you give him water?" The proper answer is, "From the high fountain." Their heaven is the place of stars, which are very near together. Mars is the angel of death, and disappears whenever a person dies. Thunder is the voice of Ali.

In my visit to their mountain homes, I found that they got on well with the Christians, but not with the Moslems, who regard them as Pagans, and do not receive their testimony in courts of justice. The tribes are allied to each other, but are not at peace. The blood-feud is the curse of their land. Always armed, they are ready for attack or defence; but as individuals, they are not inhospitable. They live in great poverty, and being in constant rebellion against the Turkish government, many have taken to robbery as a profession. It was for many years the custom of the government to impale the Nosairees instead of beheading or hanging them. This was not distasteful to the sect, as the soul could thus leave the body by the mouth.

I spent several days among this interesting people, seeing them in their homes, at their work, and at their play. The men and women mingle freely together, and here only, in the East, have I seen men and women dancing together around a bonfire. The dancers form a line with hands clasped, each person pressing the right shoulder against the left breast of the one in advance. The leader flourishes a handkerchief to keep time, while all sing and advance in a lock step, two steps advance and a little side jump, which they emphasize *à la varsovienne.* An occasional discharge of heavily-loaded flintlocks close to the heads of the girls created no nervousness on their part, but kept up the spirits of the party.

The women dress very much like the men, all affecting red stripes in their gowns. The busts of the women were covered and their faces unveiled, thus reversing the custom in Palestine. I gathered from the young men who were inclined to talk, the following points: "A man may take as many wives as he can support, and he may divorce them at pleasure. We beat our wives when we are angry with them, and when they deserve it. Ali is our God, and is now in the moon, in which his face is visible."

During a trip through their mountains I saw many white-washed tombs or *mazars* of saints, but seldom met any one on the road, or laden animals, as in Mount Lebanon; very little ground was under cultivation, and that only in the vicinity of the villages. Their mountains are much inferior to the Lebanon and the Taurus range in height and grandeur, although reported to be of greater fertility; their outline is tame, and the sub-conical hills rise not more than 1,000 feet above the general elevation. The chain is steep towards the Orontes on the east, while to the west it descends in low irregular hills to the coast. It seems to be a continuous range of chalk with occasional gypseous marls, and extends from *Kalet el Husn* on the extremity of Jebel Akkar (Lebanon) on the south, to Mount Cassius (of the Amanus) on the north. The highest point reached by me, as shown by my aneroid, was 2,378 feet above the sea, but a higher ridge lay beyond between my camp and the Orontes river at Mudik, the ancient Apamiæ. Burchardt speaks of

Nebby Metta as 5,000 feet high. Benjamin of Tudela says the extent of the Nosairee country is eight days' journey, or about 250 miles.

The principal feudal houses of to-day are Beit Hassoon, Ali Jerkis, Ahmed Aloosh, El Ailey, Tarboosh of the Kelbie district. These are children of the same ancestor. Other houses are called Sheik Maroof, Yashoot, Karalie, Hama, etc. The Turkish troops have recently penetrated these mountains and reduced these people to subjection, and their position is most abject and pitiable.

The only mission work among the Nosairees—who have been greatly slandered and greatly neglected by Christendom—was commenced at Latakia and B'humra, by Rev. Mr. Lyde, of the English Church, who died in 1860. The American missionaries at Latakia, Rev. Mr. Beattie and Dr. Metheny, took up the work subsequently, and have been useful to them in many ways, especially in promoting a better understanding between them and the Turkish authorities. Missionaries may go among the Nosairees without fear. It is true that, in the absence of tribunals, they take the law into their own hands, and exact an eye for an eye. They have preserved vestiges of the worship of Baal, the Syrian Apollo, of Astarte, the Syrian Venus, of fire, and of the heavenly bodies, and they have also retained traces of the Jewish law; but they have no cities of refuge, where protection can be found from the avenger of blood. Hence it is to be feared that until their patchwork creed shall give place to a purer faith, the mountains and valleys of *Jebel Nosairee* will continue to drink the blood of these poor creatures.—*J. Augustus Johnson, in Second Palestine Exploration Society Report.*

An editor in looking for something on his table unconsciously moved a glass paper-weight towards a would-be contributor, a lady. She looked at it a moment and suddenly left. The editor was unable to account for her departure until his eye fell upon a picture of a skeleton, pasted on the bottom of the glass, upon which was inscribed, "This man was talked to death."

CREAM OF THE EDUCATIONAL MONTHLIES.

IF the short articles in the *Chicago Teacher* are "hifallutin,' they usually contain a grain of sense. Discoursing upon punishment, one of them condemns the practice of keeping children after school, because the teacher suffers most from it, and because the effect upon the pupils' minds is bad. Whipping is better, since it sets the blood in circulation and causes increased activity of the brain. The true way is to throw the responsibility of promotion upon the parents and children. Study or fail; behave or withdraw, should be the rule. Why detaining children after school destroys their individuality, or why such detention is not adapted to the genius of our institutions, we cannot conjecture. Another one of these short articles condemns the forcing method, showing that the sixth grade questions are more difficult than those given to candidates for admission to the High School. On these questions children must have a general average of eighty per cent., and not lower than sixty per cent. in any study in order to be promoted. "Male *vs.* Female Principals," together with a "Reply," "That Conversation in Michaelmas Term," and "Special Teachers," are the leading articles in this number.

The Connecticut School Journal contains the first of a series of papers on "The Moral Side of Public School Life," a subject well worthy discussion. Many children receive a school instead of a home training, and, since they adapt themselves to the moral atmosphere surrounding them, it is important to show teachers their responsibility in this respect. Teachers who simply impart book-knowledge, perform only a part, and a small part, of their duty. This first article devotes itself to the consideration of obligations of various kinds, to God, to country, and to the family. Subsequently, "Personal self-respect," and "A consciousness of the dignity of human nature," will be considered. We are glad to see attention directed to this important subject. "The Study of English Grammar," "In the Levant," "Written Analysis of Sentences," and some selected articles, make up the rest of the *Journal.*

Quite a full account of Vassar College, written in "these hot vacation days," may be found in the *Educational Journal of Virginia*. It is chiefly taken from President Raymond's Report to the Commissioner of Education, but some reflections are added, and some lessons are drawn from the success of Vassar, the principal of which is, that Virginia should furnish better education for girls. The writer is particularly severe upon those demagogues who, "scenting here and there for prey, solicit the patronage of the people with an importunity that would do credit to a Niagara hackman." "Some curious Etymologies" will be found interesting. "Nostril," for example, is derived from "nose-drill," and "lodestones" from the verb "to lead." The other articles, with one or two exceptions, are selected.

A writer in the *National Teacher* takes President Elliot to task for stating, in his report on a National University, that the educational system of Massachusetts was supported by local taxes. The *Teacher* says that it is true that the schools are partly so supported, but that they depend also upon general State aid, and are, moreover, enjoined by State law, so it is hardly accurate to call the system "local." There are several points in the report much more important than this, and we are promised a discussion of them soon. An interesting comparison between German and American schools, closes with the sensible advice not to try to introduce the German system here, simply because, under widely different circumstances, it has been successful. We may obtain valuable hints, but in education, as in everything else, we must work out the problem of our own success. Among other subjects discussed, are "The true end of Education," "Language Notes," and "How to secure Attention."

IRASCIBLE OLD PARTY.—"Conductor, why didn't you wake me, as I asked you? Here I am miles beyond my station!" *Conductor.*—"I did try, sir, but all I could get you to say was, 'All right, Maria; get the children their breakfast; I'll be down in a minute!'"

CORRESPONDENCE.

MR EDITOR:—I sent you sometime since a Programme of our State Teachers' Association. The meeting was held as advertised at Warrensburg; and was so far as I could see, a success. About 100 teachers were present, despite "panic and hard times." Several able papers were read. Prof. F. M. Crunden of Washington University, St. Louis, on "The Importance of Rhetorical Studies;" Supt. Geo. L. Osborne of Louisiana, Pike Co., on "Should the Public School System support High Schools;" Prof. A. F. Hamilton of St. Louis Public Schools, on "History in Common Schools;" attracted perhaps most attention.

Strong resolutions were adopted looking to closer union between High Schools and Collegiate Institutions, and a Committee (O. Root, Jr., Pritchett Institute, Glasgow; H. H. Straight, Normal School, Warrensburg; R. C. Norton, Public School, Trenton,) was appointed to consult College Faculties and prepare courses of study, etc., looking to this union. A committee was also appointed to prepare a course of study for ungraded schools; the Principals of our three Normal Schools—Baldwin of Kirksville, Johonnot of Warrensburg, and Cheney of Cape Girardeau, constitute the committee.

Our Normal Schools are now in very good condition. Those of Kirksville and Warrensburg are largely attended. The school at Cape Girardeau is but just opened; the zeal, tact and thorough efficiency of its Principal, L. H. Cheney (formerly of Syracuse, N. Y.), is a guarantee of its success. Our State University reckons some 400 students in its various departments; but does not meet general approval. While there are some excellent and able men there, the general administration seems to command the respect of neither students nor people.

Our school men are considerably excited over the prospect of the passage of Butler's Civil Rights Bill, with its "School Clause." I fear the result would be disastrous to our public school system in most localities.

Truly yours,

GLASGOW, MO., Jan. 5, 1874. O. ROOT, JR.

EDUCATIONAL INTELLIGENCE.

THE Fourteenth Annual Meeting of the National Educational Association will be held in Detroit, Michigan, on the 4th, 5th and 6th days of August, 1874. The Governor of the State, the Mayor of the City, the State and City Superintendents of Public Instruction, and the Board of Education of the City of Detroit, have extended a very cordial invitation to the Association to meet in that place. Free use of assembly halls has been proffered, and every effort will be made to secure a successful and profitable meeting. Announcements concerning programme, facilities for travel, hotel accommodations, etc., will be made in due season.

MASSACHUSETTS.—WORCESTER.—Five hundred teachers were present at the Association which assembled December 29th. On the question: "Would the interests of education be promoted by increasing the relative number of male teachers in our public schools?" there was much lively discussion. The general opinion seemed to favor an increase in the number of male teachers, who generally teach longer than ladies, and who, because of their better opportunities, are better educated. They have, too, more nervous energy and physical strength. Foreign education was discussed in a paper read by Mr. Philbrick of Boston. He contrasted the American and European systems, saying, that while we spent money more freely, the Europeans made theirs go farther, and understood pedagogics as a system better than we. Educational periodicals are well supported, especially in Prussia, where there are seventy-four. Massachusetts has only one, and not one teacher in ten reads that. The Convention generally favored co-education, the discussion on that subject being opened by Prof. Bascom, of Williams College, in a paper entitled, "How shall the demand for the higher education of girls be met?"

MICHIGAN.—ANN ARBOR.—Teachers from all parts of the State assembled at the Association, on December 30th.

Prof. Payne, of Adrian, discussed "The Old and New in Education," noting the danger of reaction in educational beliefs. He favored the word-method of teaching a child to read, and recommended the analytical mode of general instruction. This called forth a general discussion on the word and phonetic methods of teaching. In the afternoon session a paper on "Systematic Resting" was read, in which it was argued that the best rest was a change of employment. The closing address of the session, "The Results of Teaching," was delivered by Hon, J. V. Campbell, LL. D., of Detroit.

NEW YORK.—The Governor's Message gives a short account of educational matters, which is, on the whole, very satisfactory, Of the 1,545, 260 persons between the ages of 5 and 21 years, 1,166,991 attend public, private, or normal schools. Of the latter some are over 21, and should not, strictly speaking, enter into the computation, but this number is more than balanced by those in charitable institutions which the estimate omits. This leaves about 378,000 who do not attend school, a large number certainly, but not as great as was supposed. There are in the State 22 literary colleges, 13 medical schools, and 5 law schools. The grade of the academies has been raised, a great gain to the common schools, inasmuch as many teachers, especially in the rural districts, are graduates of those institutions.

PENNSYLVANIA.—The State Superintendent's fortieth annual Report gives an encouraging view of the condition of education. The minimum school term has been changed from four to five months, and the teachers' salaries have been proportionately increased. In 1864 the average salary was $25.42; it is now $42.69. In 1865, 2,755 teachers attended county institutes; last year the number reached 12,302. Ten years ago over three millions were annually expended for school purposes, now the sum amounts to over eight millions. The Superintendent recommends the establishment of county institutions for those children who, through parental neglect or other causes, do not attend school. He also favors a closer connection between schools and academies, and an increase in the number of graded schools.

CURRENT PUBLICATIONS.

THAT American women, as a class, are less robust than Europeans, is unfortunately too well established to admit of doubt. Our trying climate, indigestible diet, and wearing style of life, undoubtedly exert an influence in producing this result, but the principal cause must be sought elsewhere. It can be found, we think, in woman's neglect of her peculiar organization during the formative period, that is between the ages of fourteen and nineteen years. Mothers, acting from an overstrained and false delicacy, or not wishing to deprive their daughters of present pleasure, allow them to work or play during the time when perfect rest should be enjoined. But mothers are not alone to blame for this state of things. The uninterrupted work demanded by teachers allows Nature little opportunity to work. The question then becomes a grave one whether provision should not be made in girls' schools for the demands peculiar to the female organization.

This question has recently been ably discussed in a book, "Sex in Education," by *Edward H. Clarke, M. D.* His line of argument is somewhat as follows:—Woman, in the interest of the race, is dowered with a set of organs peculiar to herself, whose complexity, delicacy, sympathies and force are among the marvels of creation. If properly nurtured and cared for, they are a source of strength and power to her. If neglected and mismanaged, they retaliate upon their possessor with weakness and disease, as well of the mind as of the body. The healthy development of these organs require mental and bodily rest at the time of the periodical phenomena which characterize woman's organization. Neglect of these precautions is punished by hysteria, neuralgia, and in the most aggravated cases, by sterility. Having enlarged upon these physiological principles, of which we have given the merest outline, Dr. Clarke devotes a chapter to cases which have come under his own observation, of girls whose health has been ruined by carelessness at the critical period of their lives. The list is long and horrible, and yet every reader can enlarge it by cases of the

same sort among acquaintances. Of course it is not to be supposed that defective systems of education are the sole cause of weakness in women, nor that all graduates of schools are pathological specimens, but the number of girl graduates who have been injured to a greater or less degree is so large as to excite the gravest alarm.

The consideration of the question of co-education follows naturally. In education three conditions, common to both sexes, and one peculiar to the female sex, are to be observed. 1st. A sufficient supply of appropriate nutriment; 2d. Mental and physical work and regimen so apportioned that repair shall exceed waste, and a margin be left for development; 3d. Sufficient sleep. The principle or condition peculiar to the female sex, is the management of the catamenial function which, from the age of fourteen to nineteen, includes the building of the reproductive apparatus. Periodicity characterizes the female organization and developes feminine force. Persistence characterizes the male organization and developes masculine force. Education will draw the best out of each, by adjusting its methods to the periodicity of one, and the persistence of the other. This then is the ground of Dr. Clarke's objections to co-education. Laying aside the danger of scandal, which he treats as of very little weight, he argues that girls need a partial or complete rest during a part of every fourth week. The demands made upon their strength are so severe that they cannot meet them, and still have a margin left for study or bodily exercise. The sustained regularity of work upon which boys thrive, and which is the rule in mixed schools, is injurious to girls. They may graduate, standing well in scholarship, and apparently healthy, but the seeds of disease have been sown, and later they are certain to develop. A gentleman, who was for a long time connected with a college occupied with co-education, has followed as far as possible, the post-college history of the female graduates of the institution he was interested in. His inquiry was directed to ascertaining how their physique behaved under the wear and tear of woman's work in life, and the conclusion he reached was, that "the co-education of the sexes is intellectually a success, physically a failure." Dr. Clarke closes his book

with a short chapter on "The European Way," which we may briefly state to be, complete rest for girls for a part of every fourth week.

This little work will of course meet with much opposition from colleges and academies where co-education prevails, and from those advocates of woman's advancement, who believe that that only is advancement which brings her to resemble man more nearly. Not that we would intimate that these latter are insincere in their beliefs; they seem, however, to forget that man and woman, although they stand upon an equality, have different spheres, and that, as it is the glory of a man to be manly, it should be woman's glory to be womanly. Others will condemn Dr. Clarke's book upon the score of indelicacy. It is not indelicate. It is perfectly frank in speaking of the evils it combats, but it is not in the least coarse. This squeamishness, prudishness we had almost called it, has already done too much harm. The peculiarities of woman's organization are not explained by mothers to their daughters, and the girls, sinning through ignorance, prepare for themselves long years of suffering. It is time that this evil was combatted intelligently, and to do that, we know of no better way than the circulation of such books as Dr. Clarke's. It is one which we would like to see in the hands of every teacher of girls not only, but in the hands of mothers as well.

Mr. T. L. Kington Oliphant has written an interesting book named "The Sources of Standard English." It does not aim to give the history of our tongue, except as it is shown in extracts of writings, from Cadmon's Runes on the Ruthwell Cross, about 680, to our own time. Still these quotations show the development of the language, how old words have been replaced by new ones drawn from foreign languages, principally the French, and how words, which have been retained, have changed their signification. The earlier quotations are not easily understood, unless one has studied English philology somewhat, but there are many bits of information, even in these first pages, which are interesting to a layman. We have probably all laughed at the Irish *wapse* for wasp, or at the expression to *axe* leave,

instead of to ask leave, and yet these are both good old English forms. So too is the negation, "I didn't never say nothing to nobody;" it lasted down to the time of the Reformation. Some of our colloquialisms and slang can boast a very ancient pedigree. The old English *hwaet* sometimes stood for the Latin *aliquid*, something, whence we have our expression, "I tell you what." In the old English homilies, about 1160, we are told that we ought to *res.rain* the evil done by thieves, the verb used being *wiostewen*, and the word is afterward repeated in the legend of St. Margaret. From this comes our slang, "*stow* that nonsense," as used by Scott and Dickens. When men say they "don't care a *curse*," they employ, perhaps unwittingly, the old English *cerse*, known in our day as *cress*.

It is curious too to note the changes in signification which some words have undergone. Orrmin, a monk who wrote a metrical paraphrase of the Gospels somewhere about the year 1200, uses *sheepish* in a sense far removed from ours; he applies it to a man who *meekly* follows Christ's pattern. As a curiosity, we quote a portion of the Creed, as written in 1400. "I bileve in god, fadir almygti, makere of hevene and of erthe: and in iesu crist the sone of him, oure lord, oon alone: * * * I beleve in the hooli goost: feith of hooli chirche: communynge of seyntis: forgyveness of synnes: agenrisyng of fleish, and everlastynge lyf. So be it." This may be compared with a Creed of 1250, which concludes thus: "forgifnes of sinnes, uprisigen of fleyes, and life withhuten hend. Amen."

The sixth chapter treats of "good and bad English in 1873," the author being very severe upon the penny-a-liner. He must be worse in England than here, for we have never seen such an expression as "involved in circumstances of inebriation," instead of intoxicated, or drunk, and yet it is vouched for as genuine. Mr. Oliphant appears to have a great dislike for words which are not descendants of the old English, a dislike which is so strong as to lead him to condemn expressive words of later and foreign birth. The book will, however, prove interesting and useful to laymen, and to the students of English philology, a class which we are glad to believe is increasing.

IT is strange that the ancient songs of the Jews should still exist substantially as they did in the time of Moses. They were not written down, but such is the fixedness of the Hebrew ritual, that the melodies were never lost, and they are still sung in all parts of the world. These songs have lately been collected by *Dr. W. F. Wetmore*, and published in a volume entitled "The Oriental." It contains pieces of varied character, from the grand and majestic numbers of the *Shirah*, the chant of Moses and the Hebrew people after the passage of the Red Sea, to the more delicate measures of the *Neginoth*, entitled, "Blessed be the Lord." The chant of Deborah and Barak, the second song mentioned in Holy Writ, is a sterling composition. The ancient melodies which the book contains will not only recommend it to the musical public, but to those interested in the history of the Jewish nation as well. The Introduction gives a biblical account of music, its varied epochs under different kings and rulers, its rise and decline, with the dispersion of the Jews, making an interesting chapter to the general reader. The music is well adapted to any form of divine worship. *The Oriental* contains 112 pages, is handsomely printed on good paper, and is nicely bound in muslin.

THE opening article in the first number of the International Review is entitled "Our Late Panic," though why it should be so named is not easily seen. It begins with the frescos in the capitol at Washington, drifts into a discussion of the railroad question, condemns the corruption of the day, and closes with a prospectus of the International Review. The teaching of the article may be said to be in part against bribery of every kind, and in part against a too rapid development of our country. "In short," to quote the language of the Review, "we must quit flying kites." This, it must be acknowledged, is sound advice, whatever may be thought of the elegance of the expression. The article closes with the hope that the Review will not be feebly conducted, to which we heartily respond, Amen. But if "Our Late Panic" is unsatisfactory, some of the other contributions are so excellent as to atone for it in great measure. This is especially the case

with The Prussian Church Law, by Baron von Holtzendorff, and International Arbitration, by Theodore D. Woolsey, formerly president of Yale College. Fires in American Cities, Deep-sea Exploration, Universal Education, and some book notices, conclude this number of the Review. The latter are hardly what would be expected in such a magazine. To slightly change an old saying, "a bad beginning makes a bad ending." With these exceptions, however, the articles are good, and will well repay perusal.

A GOOD "Atlas of Classical Geography" has been prepared by *Edward Weller, F. R. G. S.*, and *Leonhard Schmitz, LL.D.* It contains fifteen maps, with letter-press, giving a short history of the countries represented. Schools will find it useful, since it is large enough for their ordinary wants, and is cheaper than such books usually are. An "Atlas of Scripture Geography," published by the same house—the *Putnams*—consists merely of maps and questions. Its pictures of the Tabernacle and Temple are especially good.

MISCELLANEA.

A TOUR to Europe is projected by Dr. L. C. Loomis, of Washington, the party to start about July first, and travel for two months. It is proposed to visit London, the Rhine, Switzerland, and Paris, allowing a week each to the two former, and ten days each to the latter. As will be noticed, it is proposed to visit only a few places, but it will undoubtedly prove more satisfactory than a longer, and consequently more rapid, journey. The round trip ticket, costing $350, includes ocean passage out and back, railway and steamboat tickets, and hotel charges. A circular of information is to be issued soon.

THE Cornell investigation is not yet ended. Mr. Cornell, in the course of his explanation, Dec. 30, said he considered the second contract most advantageous to the University, and further stated that he entered into this operation with

the full conviction that he would make $2,000,000 over and above all expenses, and he was entirely satisfied he would accomplish all he intended to do.

THE attendance of scholars at the Brooklyn evening schools during the past winter months has been very much larger than at previous sessions. In view of this fact, the Board of Education has decided to keep the schools open during the month of January. This will be a new feature, as the term heretofore has closed the last week of December.

A LARGE number of students in the Catholic University of Ireland have sent to Cardinal Cullen a written protest against the neglect of science in that institution.

THE last National Teachers' Association, according to the *Chicago Teacher*, was nothing but a collegiate indignation meeting, protesting against the practical education of the times. We are informed, too, that Dr. McCosh and President Elliot feel this in their "shaky old bones." It is possible, as far as the former is concerned, but there is some mistake about President Elliot. His bones are not old; whether or not they are "shaky," we do not know, but we guess not.

PUBLISHERS' DEPARTMENT.

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F. K. SMITH, Bangor, Maine.

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